



Advanced Transportation Management System for Adaptive signal control (Jundiai, Brazil)

The Project:

Jundiai is a city in the south of Brazil with a population of 370,000. In 2012, an advanced Transportation Management System was deployed that comprises of 20 intersections with adaptive traffic control (UTOPIA), 130 detectors (inductive loops) and the OMNIA Platform. Between 2011 and 2012, the necessary infrastructure for the system was installed around the city, before the OMNIA/UTOPIA installation, configuration and commissioning in 2012. The key drivers for implementing this system in Jundiai were to improve traveller safety, traveller mobility, and the capacity and robustness of the transport system.

The adaptive signal control systems (UTOPIA) was installed as subsystem of the OMNIA integration platform, and controls the traffic flow across the Jundiai metropolitan area, continually adjusting signal timing parameters based on current volumes. The advanced signal control systems include centralised control of traffic signals, which aid reductions in traffic travel time, delay, number of vehicle stops and exhaust emissions for road users, in comparison to standard systems. This solution was first implemented in European countries and, after which it was installed in South America, firstly in São Paulo (OMNIA and Mystic), then in Jundiai (OMNIA and Utopia as integrated traffic management solution).

The implementation of the OMNIA platform is a base for the deployment of additional ITS systems, designed to integrate itself with a wide range of ITS applications. It can be considered a strategic approach and a move towards the wider deployment of ITS solutions in the municipality of Jundiai, such as traffic light priority for buses, city wide infomobility services and CCTV based enforcement/surveillance.

Current successes/problems

While this system is in its infancy, it is expected to bring about a reduction in fuel consumption and environmental pollution, optimization of travel time and mobility on the main axes of the traffic network and a higher quality public transport service.